

REMARKS

The Examiner is thanked for the due consideration given the application. The specification has been amended to improve the language.

Claims 1-15 and 17-21 are pending in the application. Claim 16 is canceled by this amendment. The claims have been amended to better set forth the invention. It is noted that claim 1 has been amended to incorporate subject matter from original claims 3 and 12. Subject matter from original claim 1 has been incorporated into claim 2. New claim 17 generally recites subject matter from claims 1 and 15. New claims 18-20 generally correspond to claims 2-4. New claim 21 generally corresponds to claim 6.

No new matter is believed to be added to the application by this amendment.

Rejection Under 35 USC 102(b)

Claims 1-16 have been rejected under 35 USC §102(b) as being anticipated by SCHAD (U.S. Patent 5,769,021). This rejection is respectfully traversed.

The present invention pertains to a retractable nose assembly for an amphibious vehicle that is illustrated, by way of example, in Figure 1 of the application, which is reproduced below.

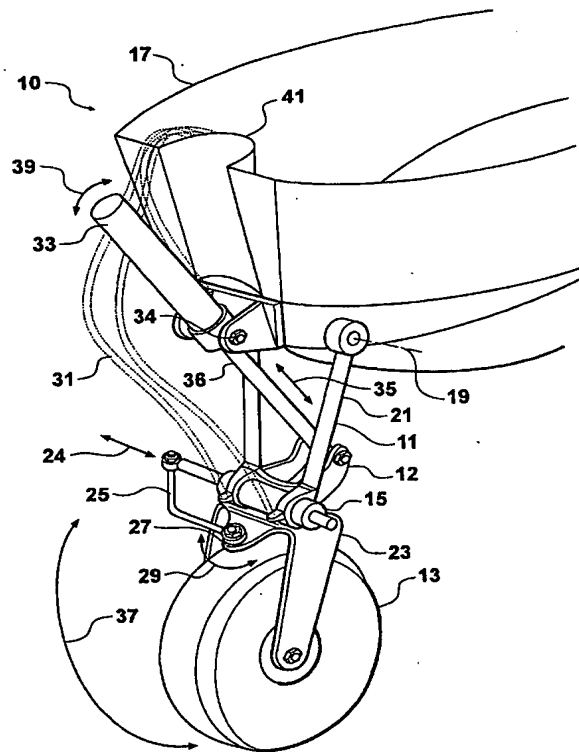


Figure 1

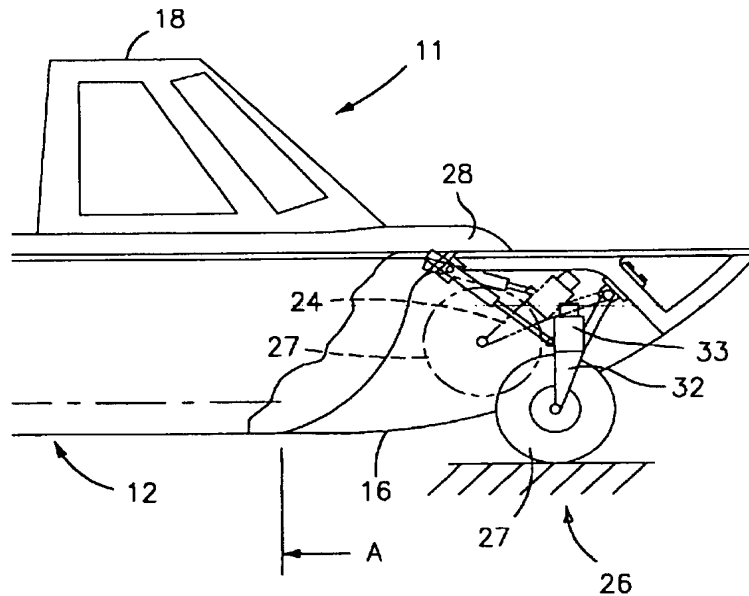
In the present invention, a nose leg assembly includes an adapter fitting. The leg and actuator are both connected to the fitting to produce a compact assembly that can be fitted to the hull of an amphibious vehicle as an assembly. In addition, the actuator is pivotally connected to the fitting at its rod end which allows it to follow the leg to a greater extent, making a large arc of travel of the leg possible. The advantages of the assembly, which includes these two features, can be summarized as follows:

A. The assembly can be fitted to the hull of a vehicle without the need for significant modification or local strengthening of attachment points. The reaction loads between the actuator and the leg can be resisted by the fitting rather than transferring these loads into the hull.

B. The assembly provides a configuration that can move the leg through a wide range of movement, i.e. greater than 120 degrees (see claim 5), without the need for a very long or a very powerful actuator since the actuator can pivot about its mounting location to maintain an effective crank angle relative to the movement of the leg throughout the majority of the range of movement of the leg.

C. The wide range of movement provided allows the leg assembly to be fitted to the exterior of the bow of a vehicle, and the wheel can be moved in one direction to a location that is useful for supporting the vehicle on the ground, and the wheel can be moved to a position well above the waterline of the vehicle for operations on water. The leg assembly allows stowage of the wheel without the need to provide a separate wheel well, and without the need to provide movable doors or fairings through which the wheel must pass.

SCHAD pertains to an amphibious vehicle that includes a retractable leg and a balloon tire, as is illustrated in Figure 1, a portion of which is reproduced below.



SCHAD fails to teach the use of an adapter fitting to form a nose leg assembly. In contrast, claim 1 of the present invention recites "an adapter fitting that is fastenable to a bow of the vehicle; a leg that is pivotally connected to the fitting; and a linear actuator that is pivotally connected both to the fitting and to the leg."

SCHAD rather teaches a nose leg assembly that is connected to the hull of the amphibious vehicle at two distinct locations. The SCHAD leg assembly requires a purposely built, or a significantly redesigned and strengthened, bow area of the vehicle, while the present invention can be used on a conventional boat hull that has been modified to a much lesser extent.

In addition to the significantly reduced requirements for bow redesign and strengthening, the present invention provides a leg assembly that is able to pivot the nose leg through a significantly greater range of movement. The nose leg assembly of SCHAD clearly only needs to move through an arc of about 45 degrees. By contrast, the nose leg of the present invention is able to move through an arc of over 120 degrees (see claim 5). The extended range of movement is at least partly made possible by the cylinder of the nose leg actuator being pivotally connected to the adapter fitting at or adjacent its rod end. This allows the actuator to pivot to a greater extent as the leg pivots, allowing it to maintain good mechanical advantage over the movement of the leg.

The additional range of movement that is possible with the nose leg assembly of the present invention provides a leg that can move a wheel from a "down" or extended position below the hull of the vehicle, to a significantly higher "up" or retracted position that can be near the top of the bow. This is also significant in terms of amphibious vehicles since it allows the use of a hull that is only slightly modified from common boat hulls. There is thus no requirement to provide a wheel well, making the bow structure simpler, allowing improved hydrodynamics, and eliminating any need for the nose wheel to occupy valuable bow space.

The Official Action asserts that the claimed invention includes functional language that is inherently met by SCHAD. However, any functional language in the claimed invention serves to precisely define present structural attributes of interrelated component parts of the claimed assembly. *In re Venezia*, 530 F.2d 956, 189 USPQ 149 (CCPA 1976). See also *MPEP* 2173.05(g).

Even if one assumes *arguendo* that some attributes of the present invention were inherent in SCHAD, this purported inherency is no bar to patentability.

Accidental results not intended and not appreciated do not constitute anticipation. *Eibel Processing Co. v. Minnesota and Ontario Paper Co.*, 261 US 45 (1923); *Mycogen Plant Science, Inc. v. Monsanto Co.*, 243 F.3d 1316, 1336, 5 USPQ2d 1030, 1053 (2001). Further, the Federal Circuit stated in *In re Robertson*, that "to establish inherency, extrinsic evidence must make clear that the missing descriptive matter was necessarily present in the thing described in the reference, and would be so recognized by persons with ordinary skill. Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a set of circumstances is not sufficient." *In re Robertson*, 169 F.3d 743, 745, 49 USPQ2d 1949 (Fed. Cir. 1999).

In this case, the Official Action has failed to produce the necessary extrinsic evidence that any of the functionally claimed elements is inherent in SCHAD.

SCHAD thus fails to anticipate claim 1 of the present invention, which recites, in part, "an adapter fitting that is fastenable to a bow of the vehicle; a leg that is pivotally connected to the fitting; and a linear actuator that is pivotally connected both to the fitting and to the leg." Claims depending upon claim 1 are patentable for at least the above reasons.

New Claims 17-21

New claims 17-21 have been presented for further prosecution on the merits. New claim 17 generally presents subject matter from claims 1 and 5, the patentability of which has been discussed above. It is therefore believed that claim 17 (and its dependent claims 18-21) are instantly allowable.

Conclusion

The Examiner is thanked for considering the Information Disclosure Statement filed March 27, 2006 and for making an initialed PTO-1449 Form of record in the application.

Prior art cited but not utilized is believed to be non-pertinent to the instant claims.

It is believed that the rejection has been overcome, obviated or rendered moot and that no issues remain. The Examiner is accordingly respectfully requested to place the application in condition for allowance and to issue a Notice of Allowability.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



Robert E. Goozner, Reg. No. 42,593
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

REG/lrs